

REMARKS

Applicant respectfully requests reconsideration and allowance of all of the claims of the application. The status of the claims is as follows:

- Claims 1-31 were pending.
- Claims 9, 10, and 14-16 are canceled herein.
- Claims 1, 11, and 18-24 are amended herein.
- New claims 32-35 are added herein.
- Claims 1-8, 11-13, and 17-35 are currently pending.

Support for the amendments and additions to the claims is found in the specification, as originally filed, at least at paragraphs 13, 14, 28, 44, 47, 48, 52, and 53. The amendments and new claims submitted herein do not introduce any new matter.

Cited Documents

The following documents have been applied to reject one or more claims of the Application:

- **Matheny:** Matheny et al., U.S. Patent Application Publication No. 2002/0161883
- **Schlonski:** Schlonski et al., U.S. Patent Application Publication No. 2002/0196451
- **Dowling:** Dowling, U.S. Patent No. 6,636,499
- **Branson:** Branson et al., U.S. Patent No. 6,865,728
- **Das:** Das et al., U.S. Patent Application Publication No. 2002/0026527

Matheny Fails to Anticipate Claims 1-2, 4-5, 7-8, 11-12, 14-15, 17-18, 24-25, 27-28, and 30-31

Claims 1-2, 4-5, 7-8, 11-12, 14-15, 17-18, 24-25, 27-28, and 30-31 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Matheny. Applicant respectfully requests reconsideration in light of the amendments presented herein.

Independent Claim 1

Claim 1, as amended herein, recites:

A method comprising:

performing resource discovery in a network having multiple subnets wherein each of the multiple subnets comprising one or more inter-subnet discovery agents installed on nodes within the multiple subnets, the resource discovery comprising:

*designating, within a first subnet, a first inter-subnet discovery agent on a first node as an active discovery agent, wherein the designating comprises **automatically selecting, as the active discovery agent, the first inter-subnet discovery agent from a set of installed discovery agents in the first subnet according to a criterion;***

discovering, by the first inter-subnet discovery agent, active discovery agents on neighboring subnets in the network; and

propagating, by the first node containing the active discovery agent, an inter-subnet resource discovery search request to the active discovery agents on neighboring subnets.

Applicant amends claim 1 to include features formerly recited in dependent claim 9. Specifically, claim 1, as amended, recites in part "*automatically selecting, as the active discovery agent, the first inter-subnet discovery agent from a set of installed*

discovery agents in the first subnet according to a criterion." The Office's own analysis indicates that Matheny does not explicitly disclose automatic selection of the active discovery agent. Office Action, page 9. Accordingly, for this reason alone, claim 1, as amended, is not anticipated by Matheny.

Dependent claim 9 was rejected over the combination of Matheny and Dowling. Office Action, page 7. However, the Office indicates that "neither of the references explicitly disclose the process of automatically selecting, as the active discovery agent from a set of installed discovery agents." Office Action, page 7. The Office asserts that these features, although not disclosed by the cited documents, would be obvious to a person of ordinary skill in the art. Office Action, page 7. Applicant respectfully challenges this factual assertion as not properly based upon common knowledge.

The appropriate standard for rejections relying on statements of facts that are allegedly "well known" in the prior art is discussed in MPEP §2144.03. "As noted by the court in In re Ahlert, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner must be "capable of such instant and unquestionable demonstration as to defy dispute" (citing In re Knapp Monarch Co., 296 F.2d 230, 132 USPQ 6 (CCPA 1961)). MPEP §2144.03(C) requires that if an Applicant challenges a factual assertion as not properly based upon common knowledge, the Examiner **must** support the finding with adequate evidence.

The Office asserts that "it is well known in the art that any action and/or procedure that can be done manually by a network administrator can also be done automatically by a computer program." Office Action, pages 7-8. Applicant submits that there are numerous actions and procedures that can be performed relatively easily by a

human being, but were difficult or impossible for a computer to perform automatically at the time the Application was filed in 2001 (and may still be difficult or impossible for a computer today). For example, challenge-response tests also known as reverse Turing tests (e.g., captcha) utilize this difference to distinguish human input from machine-generated input. Accordingly, Applicant respectfully submits that it is factually incorrect to assert that **any** action that can be done manually may also be done automatically by a computer.

For at least the reasons presented herein neither Matheny nor the combination of Metheny and Dowling discloses, teaches, or suggests all of the features of claim 1. Accordingly, Applicant submits that Matheny does not anticipate claim 1, and respectfully requests that the Office withdraw the § 102 rejection of claim 1.

Independent Claim 11

Claim 11, as amended herein, recites:

A computer-readable medium having computer-executable instructions for performing the steps of:

performing resource discovery in a network having multiple subnets wherein each of the multiple subnets comprises a plurality of simple discovery agents (SDAs) installed on nodes within each of the multiple subnets, the resource discovery comprising:

designating a one of the plurality of SDAs installed on a first node within a first subnet of the multiple subnets as a first active simple discovery agent (ASDA);

discovering, by the first ASDA, a second ASDA on a second subnet in the network, wherein the discovering comprises:

receiving a network address and ASDA status of a node containing the second ASDA via a communication from the second ASDA to the first ASDA; and

storing, by the first ASDA, the network address and ASDA status of the second ASDA in a list, the list comprising network addresses and ASDA statuses corresponding to at least one other ASDA on at least one other subnet;

receiving, by the first ASDA, a request from a resource discovery requester to provide discovery information for a discoverable resource;

responsive to the request, propagating, by the first ASDA, an inter-subnet resource discovery search request to the second ASDA and to one or more ASDAs on one or more other neighboring subnets, the propagating comprising:

searching the list comprising network addresses and ASDA statuses of ASDAs on other subnets; and

issuing a search request identifying the resource discovery requester to an ASDA included in the list; and

transmitting, by the first ASDA, to the resource discovery requester a response including resource discovery information corresponding to the discoverable resource.

Matheny discusses “an agent directory in the discovery database.” Matheny, paragraph 17. Matheny also discusses a “network manager 104 [that] loops through files in a command directory.” Matheny, paragraph 19. However, Applicant has searched and failed to find any other reference in Matheny to a “list.” Applicant notes that the Office Action does not directly address any of claims 11, 14, or 15. Office Action, pages 4-5. The portion of the Office Action discussing the anticipation rejection over Matheny does not discuss a list. Office Action, pages 4-5. Thus, Matheny does

not disclose "storing, by the first ASDA, the network address and ASDA status of the second ASDA in a list, the list comprising network addresses and ASDA statuses corresponding to at least one other ASDA on at least one other subnet," as recited in amended claim 11.

Applicant also amends claim 11 to include features similar to those formerly recited in dependent claims 14, 15, and 16. Specifically, claim 11, as amended, recites in part *"transmitting, by the first ASDA, to the resource discovery requester a response including resource discovery information corresponding to the discoverable resource."* The Office's own analysis relies on Schlonski in combination with Matheny to allegedly teach or suggest all the features formerly recited in dependent claim 16. Office Action, pages 6-7. Accordingly, for this reason alone, claim 11, as amended, is not anticipated by Matheny.

Regarding claim 16, which was similar to dependent claim 6, the Office cites only to Fig. 2 of Schlonski as the grounds of rejection. Office Action, page 6. Initially, Applicant notes that Schlonski was filed after the filing date of the instant Application but claims priority to Provisional Application 60/300,695 filed before the filing date of the instant Application. Review of the Provisional Application shows that Fig. 2 is different from the Fig. 2 shown in U.S. Patent Publication No. 2002/0196451. Applicant respectfully requests that any subsequent grounds rejection based upon Schlonski explicitly indicate where in the Provisional Application support for the grounds of rejection may be found.

Applicant respectfully submits that citation to Fig. 2 of Schlonski, without further explanation of the relevance of that Fig. to Applicant's claim language, fails to establish

a *prima facie* case of unpatentability at least because the Supreme Court requires “some **articulated** reasoning with some rational underpinning to support the legal conclusion of obviousness.” KSR Int’l Corp. v. Teleflex, Inc., 550 U.S. 398, 418 (2007) quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Emphasis added). Moreover, “[t]o facilitate review, this analysis [of obviousness] should be made **explicit**.” See *In re Kahn*, 441 F. 3d 977, 988 (Fed. Cir. 2006) emphasis added.

Additionally, Applicant notes that amended claim 11 differs from former dependent claim 16 at least in the recitation that the “*transmitting, [is] by the first ASDA.*” Additional features of the first ASDA are presented earlier in claim 11. The combination of Schlonski in Matheny does not teach or suggest the recited “*transmitting*” by any entity having all the recited features of the “*first ASDA.*”

For at least the reasons presented herein, neither Matheny nor the combination of Matheny and Schlonski discloses, teaches, or suggests all of the features of claim 11. Accordingly, Applicant submits that Matheny does not anticipate claim 11, and respectfully requests that the Office withdraw the § 102 rejection of claim 11.

Independent Claim 24

Claim 24, as amended herein, recites:

A system for automating network-wide resource discovery in a network having multiple subnets, the system comprising:

a set of local discovery agents installed on nodes within each of the multiple subnets within the network, the set of local discovery agents configured to implement resource discovery requests within a subnet according to a local discovery protocol; and

a first inter-subnet discovery agent on a first node designated as an active discovery agent, the first inter-subnet discovery agent including procedures for facilitating:

discovering and communicating with other active discovery agents on neighboring subnets in the network according to a network protocol; and

propagating an inter-subnet resource discovery search request including the network address of the requesting resource via a unicast message to the active discovery agents on neighboring subnets.

The analysis of claim 24 by the Office, prior to the current amendments, cites to paragraphs 9, 10, 12, and item 204 of Fig. 2 of Matheny in support of the rejection of “propagating an inter-subnet resource discovery search request to the active discovery agents on neighboring subnets.” Office Action, page 5. Matheny discusses “network discovery operations.” Matheny, paragraph 10. Matheny also shows “Request Discovery.” Matheny, Fig. 2, box 204. However, Matheny, either in the cited portions or elsewhere, does not disclose “*propagating an inter-subnet resource discovery search request including the network address of the requesting resource via a unicast message to the active discovery agents on neighboring subnets,*” as recited in amended claim 24.

For at least the reasons presented herein, Matheny does not disclose all of the features of claim 24. Accordingly, Applicant submits that Matheny does not anticipate claim 24, and respectfully requests that the Office withdraw the § 102 rejection of claim 24.

Dependent Claims 2, 4, 5, 7, 8, 12, 14, 15, 17, 18, 25, 27, 28, 30, and 31

Applicant cancels claims 14 and 15 without prejudice, waiver, or disclaimer of the subject matter. Features from these claims are now included in independent claim 11 from which they formerly depended

Claims 2, 4, 5, 7, 8, 12, 17, 18, 25, 27, 28, 30, and 31 ultimately depend from one of independent claims 1, 11, or 24. As discussed above, claims 1, 11, and 24 are not anticipated by Matheny, and are therefore allowable over the cited document. Claims 2, 4, 5, 7, 8, 12, 17, 18, 25, 27, 28, 30, and 31 are also allowable over the cited document of record for at least their dependency from an allowable base claim, and also for the additional features that each recites.

Applicant respectfully requests that the Office withdraw the § 102 rejection of claims 2, 4, 5, 7, 8, 12, 17, 18, 25, 27, 28, 30, and 31.

Claims 3, 6, 13, 16, 26, and 29 are Non-Obvious Over Matheny in view of Schlonski

Claims 3, 6, 13, 16, 26, and 29 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Matheny in view of Schlonski. Applicant respectfully requests reconsideration in light of the amendments presented herein.

Applicant cancels claim 16 without prejudice, waiver, or disclaimer of the subject matter. Features of claims 16 are now included in independent claim 11 from which it formerly depended.

Claims 3, 6, 13, 26, and 29 ultimately depend from one of independent claims 1, 11, or 24. As discussed above, claims 1, 11, and 24 are allowable over Matheny.

Schlonski is cited for its alleged teaching of a "network discovery request [that] is to identify printers" and of "transmitting to the resource discovery requester a response including the resource information." Office Action, page 6. However, Schlonski fails to remedy the deficiencies of Matheny as noted above with regard to independent claims 1, 11, and 24. Therefore, claims 3, 6, 13, 26, and 29 are also allowable over the cited documents of record for at least their dependency from an allowable base claim, and also for the additional features that each recites.

For example, claims 6 and 29 are allowable over the combination of Matheny and Schlonski for at least reasons similar to those discussed above with respect to independent claim 11.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claims 3, 6, 13, 26, and 29.

Claims 9, 10, 19, and 20 are Non-Obvious Over Matheny in view of Dowling

Claims 9, 10, 19, and 20 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Matheny in view of Dowling. Applicant respectfully requests reconsideration in light of the amendments presented herein.

Applicant cancels claims 9 and 10 without prejudice, waiver, or disclaimer of the subject matter. Features of claims 9 are now included in independent claim 1 from which it formerly depended.

Claims 19 and 20 ultimately depend from independent claim 11. As discussed above, claim 11 is allowable over Matheny. Dowling is cited for its alleged teaching of "manually selecting the active discovery agent." Office Action, page 7. However,

Dowling fails to remedy the deficiencies of Matheny as noted above with regard to independent claim 11. Therefore, claims 19 and 20 are also allowable over the cited documents of record for at least their dependency from an allowable base claim, and also for the additional features that each recites.

For example, claim 19 is allowable over the combination of Matheny and Dowling for at least reasons similar to those asserted above with respect to independent claim 1.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claims 19 and 20.

Claim 21 is Non-Obvious Over Branson in view of Dowling

Claim 21 stands rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Branson in view of Dowling. Applicant respectfully requests reconsideration in light of the amendments presented herein.

Independent Claim 21

Claim 21, as amended herein, recites:

A resource discovery framework for resource discovery embodied in a computer-readable medium, the framework comprising:

an active discovery agent within a one of multiple subnets within a network, the active discovery agent configured to identify and to communicate with other active discovery agents on neighboring subnets within the network, wherein each subnet comprises a plurality of discovery agents which, if selected, will function as the active discovery agent;

a selection mechanism for designating one of the discovery agents as the active discovery agent within each subnet; and

a request propagation mechanism by which nodes containing the active discovery agents receive resource discovery requests from other nodes within the same subnet and propagate an inter-subnet resource discovery search request to nodes containing active discovery agents on neighboring subnets.

Branson describes “three DiscoveryAgent classes 252, 254, and 256, [that] preferably inherit from DiscoveryAgent class 250... these classes are preferably subclasses of DiscoveryAgent class 250.” Branson, column 9, lines 49-52. Branson also discusses an “Ip subnet (the ‘Ip’ stands for ‘Internet protocol’) Discovery Agent class 252.” Branson, column 10, lines 7-8.

When analyzing claim 21 prior to the current amendments, the Office asserted that Fig. 1 and Fig. 2 items 250 and 252 disclose an active discovery agent. Office Action, page 8. The Office provides no evidence or arguments that Dowling teaches or suggests anything beyond a user designating a discovery agent as a commander. Office Action, page 8. Applicant provided above textual citations from Branson discussing items 250 and 252.

However, the combination of Branson and Dowling does not teach or suggest “*an active discovery agent within a one of multiple subnets within a network, the active discovery agent configured to identify and to communicate with other active discovery agents on neighboring subnets within the network, wherein each subnet comprises a plurality of discovery agents which, if selected, will function as the active discovery agent,*” as recited in amended claim 21. The concept of an active discovery agent communicating with other active discovery agents on neighboring subnets is absent from Branson. Additionally, although Branson discusses classes and subclasses in an

object oriented framework, Branson is silent regarding a plurality of discovery agents that can be selected and then function as the active discovery agent.

Additionally, when analyzing claim 21 prior to the current amendments, the Office asserted that Fig. 3 of Branson discloses a request propagation mechanism. Office Action, page 8. The Office provides no evidence or arguments that Dowling teaches or suggests anything related to a request propagation mechanism. Office Action, page 8. Fig. 3 of Branson does not include the word “request” or otherwise explicitly show a request. Applicant respectfully submits that citation to Fig. 3 of Branson, without further explanation of the relevance of that Fig. to Applicant's claim language, fails to establish a *prima facie* case of unpatentability at least because the Supreme Court requires “some **articulated** reasoning with some rational underpinning to support the legal conclusion of obviousness.” KSR Int'l Corp. v. Teleflex, Inc., 550 U.S. 398, 418 (2007) quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Emphasis added). Moreover, “[t]o facilitate review, this analysis [of obviousness] should be made **explicit**.” See In re Kahn, 441 F. 3d 977, 988 (Fed. Cir. 2006) emphasis added.

Nevertheless, Applicant amends claim 21 to recite in part “*a request propagation mechanism by which nodes containing the active discovery agents receive resource discovery requests from other nodes within the same subnet and propagate an inter-subnet resource discovery search request to nodes containing active discovery agents on neighboring subnets.*” This portion of amended claim 21 is not taught or suggested by Branson at least because nowhere in the cited Fig. 3, or elsewhere, in Branson is there any discussion of active discovery agents that receive resource discovery requests from other nodes within the same subnet.

For at least the reasons presented herein, the combination of Branson and Dowling does not teach or suggest all of the features of claim 21. Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claim 21.

Claims 22 and 23 are Non-Obvious Over Branson, Dowling and in further view of Das

Claims 22 and 23 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Branson, Dowling and in further view of Das. Applicant respectfully requests reconsideration in light of the amendments presented herein.

Claims 22 and 23 ultimately depend from independent claim 21. As discussed above, claim 21 is allowable over the combination of Branson and Dowling. Das is cited for its alleged teaching of “a network comprising a first and second network wherein [the] second network includes two or more subnetworks wherein each subnetwork includes an associated subnet agent.” Office Action, page 9. However, Das fails to remedy the deficiencies of Branson and Dowling as noted above with regard to independent claim 21. Therefore, claims 22 and 23 are also allowable over the cited documents of record for at least their dependency from an allowable base claim, and also for the additional features that each recites.

Accordingly, Applicant respectfully requests that the Office withdraw the § 103 rejection of claims 22 and 23.

New Claims 32-35

Applicant adds new claims 32-35 to obtain an additional scope of coverage commensurate with the original disclosure. Claims 32-35 ultimately depend from one of

independent claims 1, 11, or 24. Therefore, claims 32-35 allowable over the cited documents of record for at least their dependency from an allowable base claim, and also for the additional features that each recites.

Applicant respectfully requests allowance of claims 32-35.

Conclusion

For at least the foregoing reasons, all pending claims are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the application. If any issues remain that would prevent allowance of this application, **Applicant requests that the Examiner contact the undersigned representative before issuing a subsequent Action.**

Respectfully Submitted,

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